

B. Pharm 2nd Year 2nd Semester Examination-2024

Medicinal Chemistry-I

Code- BP402T

Time: 3 hours

Full marks: 75

Answer **any five** questions taking **at least 2** from each group.

Group-A

1. a) Define & classify non-steroidal anti-inflammatory, analgesics and anti-pyretic drugs with Examples. [4]
b) Discuss the pathophysiology of inflammation. [1]
c) Outline synthetic scheme & chemical name of the following:
i) Aspirin ii) Ibuprofen iii) Tolmetin Sodium and iv) Paracetamol. [10]
2. a) Discuss the mode of action & SAR of Indoleacetic acid & n-arylanthranillic acid. [8]
b) Define narcotic analgesics with examples. [1]
c) Outline the structure & uses of the following: [6]
Indomethacin, Diclofenac sodium, Caffeine, Meclofenamic acid, Codeine, Phenylbutazone.
3. a) Define and classify CNS stimulants, sedative-hypnotics, anti-convulsants and antipsychotic drugs with examples. [6]
b) Outline mode of action and SAR of Barbituric acids. [4]
c) Discuss the synthesis & chemical names of the following: [2+2+1=5]
Phenobarbitone Sodium, Pentobarbitone Sodium and Barbitone Sodium.
4. a) What are Benzodiazepines? Give some examples. [2]
b) Draw the structures & uses of the following: [4]
Diazepam, Nitrazepam, Chlordiazepoxide and Morphine.
c) Outline synthetic scheme (**any three**) of the following: [9]
Chlorpromazine, Amitryptiline, Trifluoramazine and Nortryptiline.

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FM-100

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Group-B

5. Write about all physicochemical parameters responsible for drug absorption. 15
6. Explain Phase I and Phase II metabolism with suitable examples. 15
7. a) Classify Bio-isostearism with suitable examples. 9+6
b) What happened after metabolism of acetaminophen, histamine and isoniazid? Write with structure(s).
8. a) How adrenaline was bio-synthesized? Write in details. 3+2+6+4
b) How nor- adrenaline was metabolized?
c) Write a note on the factors affecting drug metabolism.
d) How optical isomerism and geometrical isomerism effects drug action? Explain